

**Staff Guidance for Determining Site Characteristics, Permit Conditions, and COL Action Items**

**Site Characteristics:**

Based on site investigation, exploration, analysis and testing, the applicant initially proposes a set of site characteristics. These site characteristics are specific physical attributes of the site, whether natural or man-made. Site characteristics, if reviewed and approved by the staff, are specified in the ESP. In general, site characteristics may fall into one of the following four categories:

- (1) Severe natural phenomena - (e.g., tornado wind speed, probable maximum flood, maximum groundwater levels);
- (2) Physical features of the site - (e.g., soil strength, topography);
- (3) Boundaries or locations controlled by the applicant - (e.g., exclusion area boundary, low population zone); and
- (4) Characteristics relating to nearby human activities - (e.g., X/Q for the nearest resident, meat animal, or vegetable garden; distances to nearby man-made hazards to the new plant).

The site characteristics in the ESP form a set of minimum design values for the design and construction of a new plant to be built at the site, and the ESP will resolve all issues with respect to the severity of natural phenomena under GDC 2. In the absence of a compliance or adequate protection issue, 10 CFR § 52.39 precludes the staff from revisiting the site characteristics at the COL stage. Accordingly, the staff should ensure that all physical attributes of the site that could affect the design bases of SSCs important to safety are reflected in site characteristics. The staff should carefully examine any design-related matter it is considering to identify the physical attributes that affect the design basis to identify site characteristics. Design matters will not normally call for any further control in the ESP.

**Permit Conditions:**

The Commission's regulation in 10 CFR § 52.24 authorizes the inclusion of limitations and conditions in an ESP. A permit condition is not needed when an existing NRC regulation requires a future regulatory review and approval process to ensure adequate safety during design, construction, or inspection activities for a new plant. The staff should recommend a permit condition in only three circumstances:

- (1) The staff's evaluation in the SER rests on an assumption that is not currently supported, and which is practicable to support only after ESP issuance - (e.g., subsurface conditions discovered upon excavation for foundation construction);
- (2) A site physical attribute is not acceptable for the design of SSCs important to safety - (such a condition may call for action to remedy the deficiency. e.g., cracked or weathered rock that is not acceptable for bearing foundation loads is replaced or filled with lean concrete or otherwise treated so as to be acceptable) (the attribute may be deficient only with respect to a particular type of reactor); or
- (3) The staff's evaluation depends on a future act - (e.g., a state regulatory approval may be called for).

## **COL Action Items:**

The current rules certifying standard designs define COL action items as follows:

*Combined license (COL) action items (combined license information), which identify certain matters that shall be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references this [design certification rule]. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR.*

The staff intends to include in each ESP a condition similar to the above provision of the current design certification rules. The staff may identify COL action items with respect to individual site characteristics in order to ensure that particular significant issues are tracked and considered during the COL phase. The COL action items need not and should not be exhaustive. Rather, COL action items should focus on matters that may be a significant issue in any COL application referencing the particular ESP. COL action items should not normally be needed for matters controlled by permit conditions, or explicitly covered by the postulated design parameters (i.e., within a PPE or design described in the ESP application).